

FIG. 1

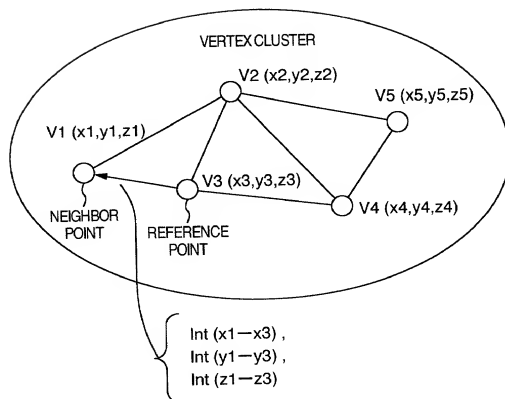


FIG.2A

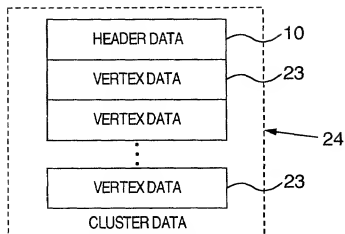


FIG.2B

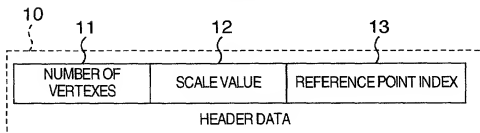


FIG.2C

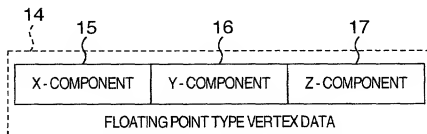


FIG.2D

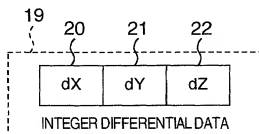


FIG.3A

INTEGER DIFFERENTIAL EXPRESSION OF IN-CLUSTER COORDINATES
(REFERENCE POINT=V3)

VERTEX	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
V1	$\text{Int}(x1-x3)$	$\text{Int}(y1-y3)$	$\text{Int}(z1-z3)$
V2	$\text{Int}(x2-x3)$	$\text{Int}(y2-y3)$	$\text{Int}(z2-z3)$
V3	$x3$	$y3$	$z3$
V4	$\text{Int}(x4-x3)$	$\text{Int}(y4-y3)$	$\text{Int}(z4-z3)$
V5	$\text{Int}(x5-x3)$	$\text{Int}(y5-y3)$	$\text{Int}(z5-z3)$

FIG.3B

FLOATING POINT DIFFERENTIAL EXPRESSION OF IN-CLUSTER COORDINATES
(REFERENCE POINT=V3)

VERTEX	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
V1	$x1-x3$	$y1-y3$	$z1-z3$
V2	$x2-x3$	$y2-y3$	$z2-z3$
V3	$x3$	$y3$	$z3$
V4	$x4-x3$	$y4-y3$	$z4-z3$
V5	$x5-x3$	$y5-y3$	$z5-z3$

FIG.4

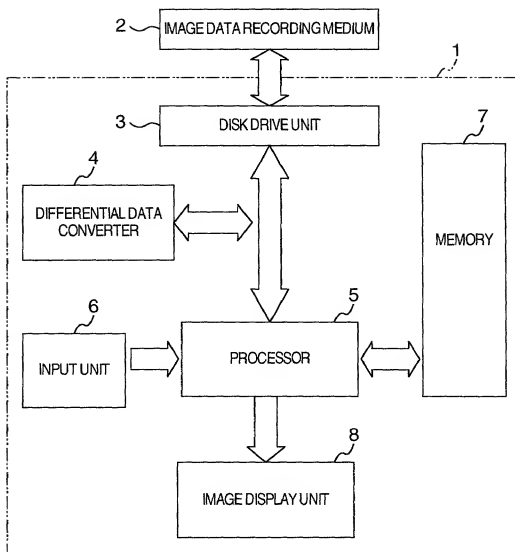


FIG.5

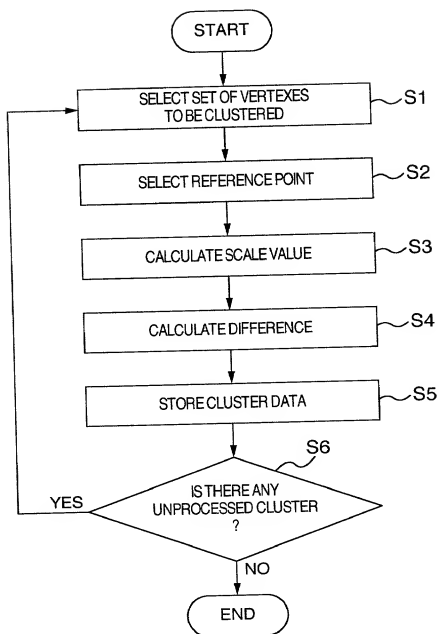


FIG.6A

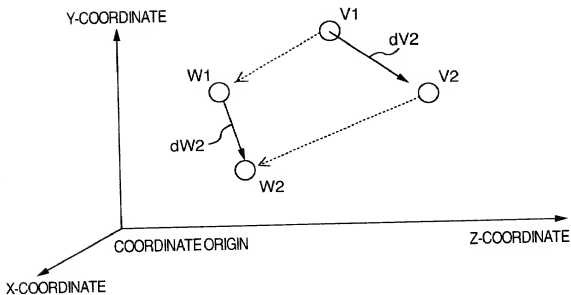


FIG.6B

AFFINE TRANSFORMATION : $W = M * V + P$. . . EXPRESSION (1)
$ \begin{pmatrix} tx \\ ty \\ tz \end{pmatrix} = \begin{pmatrix} m11 & m12 & m13 \\ m21 & m22 & m23 \\ m31 & m32 & m33 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} + \begin{pmatrix} p \\ q \\ r \end{pmatrix} \dots \text{EXPRESSION (2)} $	

[illegible]

COORDINATE DIFFERENTIAL EXPRESSION
BEFORE AFFINE TRANSFORMATION
(REFERENCE POINT=V1)

COORDINATE DIFFERENTIAL EXPRESSION AFTER AFFINE TRANSFORMATION (REFERENCE POINT=W1)

VERTEX	X-COMPONENT	Y-COMPONENT	Z-COMPONENT
W1	X-COMPONENT OF M^*V1+P	Y-COMPONENT OF M^*V1+P	Z-COMPONENT OF M^*V1+P
W2	X-COMPONENT OF M^*dv2	Y-COMPONENT OF M^*dv2	Z-COMPONENT OF M^*dv2

FIG.8A

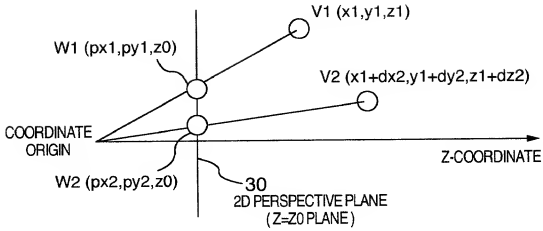
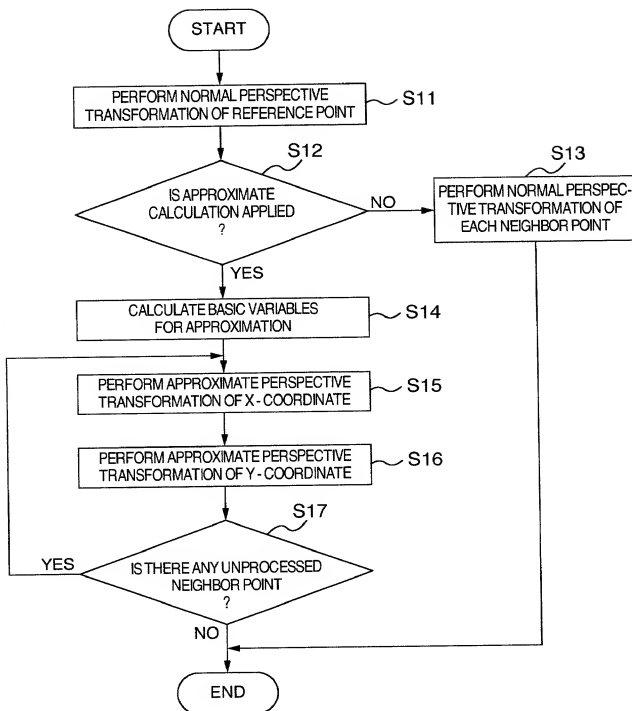


FIG.8B

$A=z0/z1$	EXPRESSION 1
$B=z0/(z1*z1)$	EXPRESSION 2
$px1=A*x1$	EXPRESSION 3
$py1=A*y1$	EXPRESSION 4
$px2=(A-B*dz2)*(x1+dx2)$	EXPRESSION 5
$py2=(A-B*dz2)*(y1+dy2)$	EXPRESSION 6
$D=z0/(z1+dz)$	EXPRESSION 7
$px=D*(x1+dx)$	EXPRESSION 8
$py=D*(y1+dy)$	EXPRESSION 9
$\frac{1}{z+dz} = \frac{1}{z} - \frac{1}{z^2} dz + \frac{1}{z^3} dz^2$ $- \frac{1}{z^4} dz^3 + \dots$	EXPRESSION 10
$\frac{z0}{z1+dz2} = \frac{z0}{z1} - \frac{z0}{z1^2} * dz2$	EXPRESSION 11

FIG.9



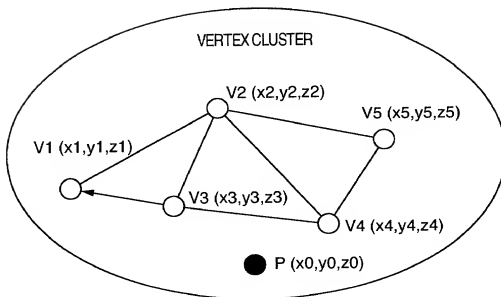
[illegible]

FIG. 10B

VERTEX	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
V1	Int (x1-x0)	Int (y1-y0)	Int (z1-z0)
V2	Int (x2-x0)	Int (y2-y0)	Int (z2-z0)
V3	Int (x3-x0)	Int (y3-y0)	Int (z3-z0)
V4	Int (x4-x0)	Int (y4-y0)	Int (z4-z0)
V5	Int (x5-x0)	Int (y5-y0)	Int (z5-z0)

FIG. 11

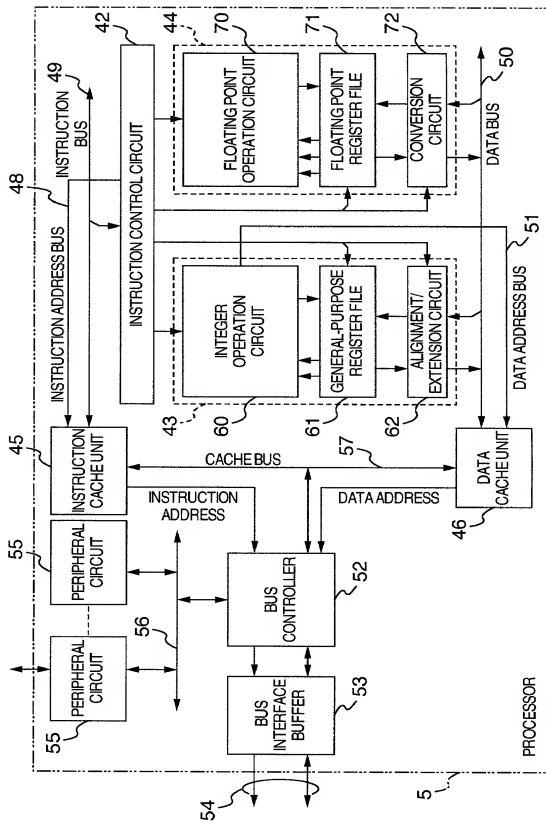


FIG.12

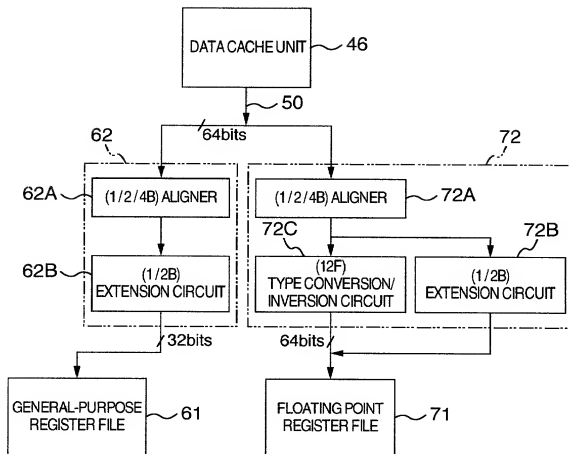


FIG.13

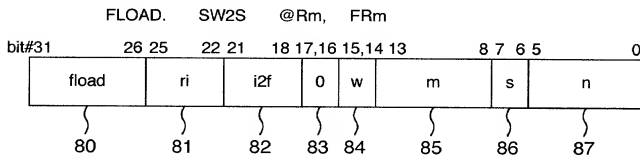


FIG.14

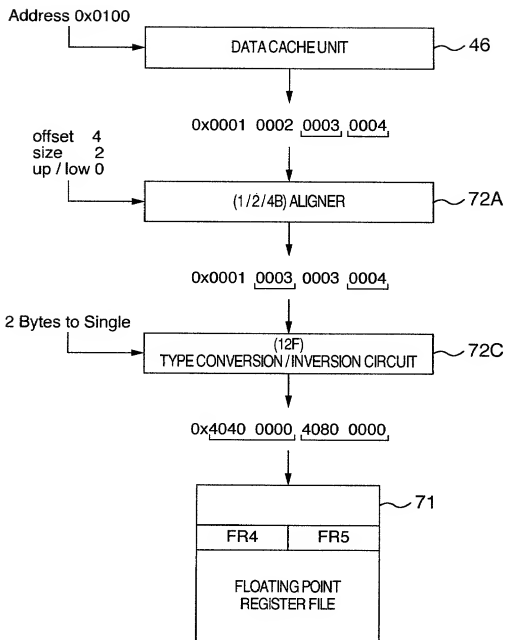


FIG.15

